



# OHV DIAGNOSTIC

Preferred equipment for  
condition assessment of  
high voltage assets





# Trouble-free with ohv

If you are involved in generating, transmitting or distributing electrical power, then you know that accurate knowledge about the condition of your assets is key to avoiding trouble.

At the time of delivery, after installation, during routine maintenance or operations, the ability to detect the faintest signs of a future malfunctions allows you to minimize the negative impact of faults that occur during manufacturing, installation or normal aging processes.

Whether you have cables and switchgears, or transformers and rotating machines, with ohv diagnostic equipment, you can detect vulnerabilities in your system before the insulation fails and fix them in good time – before they cause trouble.

## **Making your job gloriously predictable**

Thanks to the combination of proven electrical engineering hardware and sophisticated software solutions, working with our products is surprisingly easy and that's where the surprises end. That's because our devices are as reliable and accurate as you would expect from German engineers.

Furthermore, thanks to ohv's state-of-the-art diagnostic software, you easily establish a clear picture of the condition of your assets. This allows you to confidently optimize your operations and maintenance planning and so avoid unscheduled outages.

If you're looking for reliable, competitively-priced products, from a dependable market-leading niche company, then look no further than ohv diagnostic.

# Focused front-liners

ohv diagnostic has become foremost global provider of products and services for the condition assessment of medium and high voltage power assets thanks to our strong focus on this field.

## Dedicated and experienced

On-site high voltage testing is a field populated by a close-knit global community of specialists. So in 2013, when the founders of ohv established the company, they were able to bring together a team of expert engineers with decades of professional experience and long-standing friendships.

Utilizing all their specific experience in the design, manufacture, application and improvement of high voltage test equipment, the founding team rapidly established ohv as the market leader in their preferred product categories and markets.

As a customer, you benefit from the dedication of the team as they apply frontline experience and cutting edge insights to create world-class products that meet your needs at the right price point.

## Our people, our vision

With our products, power utilities and network operators all over the world have the tools they need to make accurate condition assessments and so optimize everything from the commissioning to the operations and maintenance of their high voltage power systems.

Today we have almost 20 people working at our head office in Dresden. Our network of local partners in key global centers brings the total ohv family to around 50 individuals.

Our vision is to develop, manufacture and supply products for high voltage testing and monitoring applications that represent the best-in-class combination of accuracy and ease of use in a reliable, durable and cost-effective hardware and software package.

→ YOUR PEACE OF MIND IS OUR PRIORITY



# Our products

We develop, produce and sell products that make your life easier by supporting your need to know the condition of your assets – accurately, safely and cost effectively.

## Developed and built to meet your needs

At ohv diagnostic, we are thoroughly familiar with the latest research into high voltage testing and partial discharge detection – in the lab, in the factory and on site. Furthermore, we have decades of power industry operations and maintenance experience. This firsthand experience of what really matters to our customers flows into all our development and manufacturing decisions and guides our approach to marketing and sales.

Ultimately, we offer easy to use products that answer straightforward operational questions, so that you can always be *'trouble-free with ohv'*.

## For what?

With ohv diagnostic products you can test, measure and monitor a wide range of assets including:

- Medium voltage distribution cables (MV)
- High voltage transmission cables (HV)
- Gas insulated switchgear (GIS)
- Metal-clad switchgear
- Power and instrument transformers
- Hydro and turbo generators
- Medium voltage motors

## For where and when?

Our customers rely on the accuracy, reliability and ease of use of our products for:

- On-site commissioning tests
- Scheduled maintenance condition assessment
- In operation online periodic checks
- In operation online permanent monitoring
- Testing stations
- Lab tests

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## OUR PRODUCT PORTFOLIO

### Damped AC systems

MV  
DAC M30  
DAC M60



HV  
DAC H200  
DAC H300

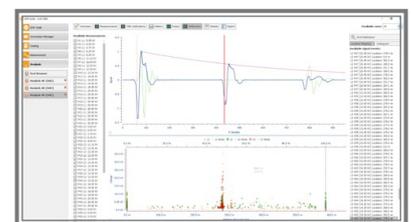


### Detection and recording

PDD  
PDMS  
Accessories



Software



# Partial discharge detection systems

At ohv diagnostic, we offer a comprehensive range of products for partial discharge detection and monitoring. Our detection systems are designed for on-site use by an engineer while our monitoring systems can be installed and integrated into a DCS or SCADA system for event recording or notifications.

## What are partial discharges?

A partial discharge is a localized dielectric breakdown that occurs in defective insulation, for example, in a gas bubble or void in an insulating material. When the voltage in the conductor rises past a certain point, a small spark will cross the void. Each spark results in a short pulse of current flow which reoccurs each time the voltage threshold is crossed. Repeated discharges further damage the insulating material so that the interval between the discharges shortens until the insulation fails and a major equipment failure occurs.

## Detection and monitoring expertise

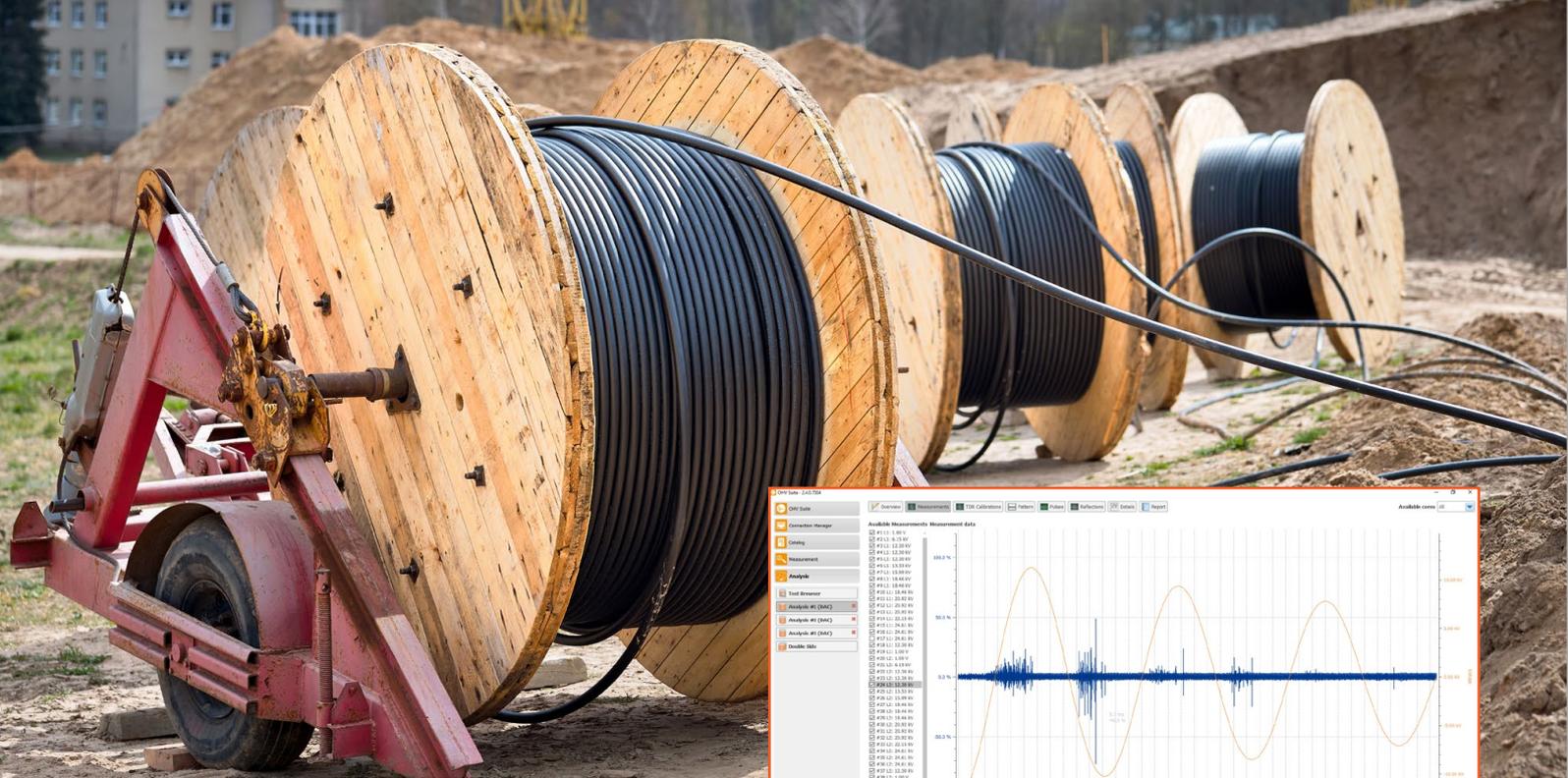
ohv devices employ analog and digital technologies to filter out the noise and other disturbing factors leaving only the faint high and ultra high frequency current pulses created by partial discharges. Then our proprietary software analyses these signals to assess the severity of the material vulnerability and to help determine its location.

## Directional probes

The location of partial discharges can also be located by using highly sensitive and directional probes. We offer ultrasound, transient earth voltage (TEV) and ultra high frequency (UHF) sensing products.



The progress of dielectric breakdown across an insulator.



# Damped AC

Using our product systems you can test the safety of your cables and precisely localize defects in kilometers of cables.

Cables need to be tested at the time of installation, during planned overhauls and after years of operation. Traditionally this was done by applying a voltage above the operational level to see if you get a disruptive discharge. To avoid the need for these kind of destructive tests, Damped AC methods, also known as oscillating wave test systems (OWTS), have been steadily growing in popularity since 1992.

In our DAC products, we leverage the principle of serial resonance and apply a low power signal to the cable, which is cut off suddenly to create an oscillating voltage, which allows the partial discharges to be detected and the dissipation factor to be measured.

## A convenient low power demand

Thanks to the low-power demands of DAC methods, ohv diagnostic DAC products plug are intrinsically safer than traditional destructive methods. Even when insulation fails, there is no danger of the test causing a fire because the voltage is cut off naturally.

Furthermore, any standard power outlet can be used, making testing quick and convenient.





# Our services

We support our comprehensive product portfolio with a full range of pre- and after-sales supporting services.

## Tailored products and systems

Engineering is the art of adapting proven methods and products to deliver the best-fit solutions. Building on our tried-and-tested products and services, we can quickly optimize our hardware and customize the software to deliver the best performance in your specific application.

## Condition assessment training

The best testing, measuring or monitoring system, will only be as good as the people who use it. So we also offer commissioning and user training services at our headquarters in Dresden, Germany, the offices of our local partners or at your chosen location.

## One-site services

Besides, design and training, we offer on-site services for testing, measuring and monitoring of cables, transformers, accessories and switchgear at the time of:

- installation or commissioning
- when aging becomes an issue
- after repairs

## Repairs and calibration

When you choose ohv diagnostic, you are choosing to go trouble-free because we manufacture the most reliable products. Besides our own systems, we also calibrate, maintain and repair partial discharge detectors, accessories or test systems made by other OEM companies.





## Trouble free with ohv – your global-local partners

ohv diagnostic has its headquarters in Dresden, Germany, a short drive from the airport. And with international sales and service partners around the world, you can count on our specialist support wherever you are.

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